

STATEMENT ON THE GROWTH OF POWER TRANSMISSION INFRASTRUCTURE & THE PUBLIC-PRIVATE-PARTNERSHIP (P.P.P.) FINANCING OPTION

1. BACKGROUND

In mid-1950s, a 132kV transmission line was constructed from the then newly constructed Owen Falls Dam in Uganda to Juja substation and subsequently extended to Rabai substation. The country thereafter embarked on increasing the size of the national grid and by 2008, the total length was 3,400 circuit km serving a peak demand of 1,044MW.

Since inception in December 2008, KETRACO has made concerted efforts at strengthening and expanding Kenya's national transmission grid and regional interconnectors. This has enhanced the quality, reliability, and security of electricity supply in Kenya, promoted regional power trade and enabled regional integration of power markets.

The power transmission network is currently operating at 132kV, 220kV, 400kV & 500kV. The size of transmission network (500kV, 400kV, 220kV and 132kV) by circuit length is approximately 9,105 km of which 5,638 km (61.92%) is owned and operated by KETRACO. In addition, KETRACO has completed and commissioned 42 new substations with 6,396 MVA capacity and 31 bay extensions. Electricity demand has grown to the current peak demand of 2,239MW.

However, Kenya's electricity transmission infrastructure is currently inadequate to meet the growing demand for power, particularly in rapidly industrializing regions and underserved rural areas. The existing transmission lines are constrained, leading to inefficiencies and occasional power outages. The lack of sufficient transmission capacity is a barrier to industrial growth, rural electrification, and the integration of Kenya into the regional energy market.

The expansion of the national grid in the 20 years Electricity sector Least Cost Power Development Plan (LCPDP) and KETRACO's Transmission Master Plan (TMP) requires expansion growth of a further 9,600 circuit km of transmission lines and 15,891 MVA substation transformation capacity. The TMP has identified approximately 90 no. transmission infrastructure additional projects needed to meet the peak demand expected to reach 10,000MW by 2042. The total investments requirement for this period is estimated at US\$ 5,199 million. This is approximately US\$ 250 million per year for 20 years.

2. FINANCING MODEL

Since the inception of KETRACO in 2008, The National Treasury has borrowed loans directly from Development Partners for transmission infrastructure capital investment and subsequently on-granted the funds to KETRACO for project development. Most of the loans from The World Bank (IDA), Africa Development Bank, JICA, AFD – French Development Agency, European Investment Bank, Exim Bank of China, Exim Bank of India, The Kingdom of Spain and Belgium KBC Bank.

Currently The National Treasury has secured/committed funds from World Bank, African Development Bank, Korean ECDF, JICA, Exim Bank of China, French Development Agency and KfW for the next set of transmission infrastructure projects. The upcoming projects include the following:

1. 220kV Mariakani - Dongo Kundu line and associated substations,
2. 132kV Narok- Bomet line and associated substations,
3. Malindi – Weru – Kilifi line and associated substations,
4. Kabarnet – Rumuruti line and associated substations,
5. STATCOMS at Rabai & Suswa,
6. Kimuka 400kV substation,
7. Loiyangalani-Marsabit & Marsabit-Isiolo lines and associated substations,
8. National System Control Centre, and
9. Makindu 400/132kV

Typically, the historical project circle turnaround time for the Development Financing Partners and KETRACO has been between 5-8yrs. Thus, the next set of funding from Development Financing Partners is estimated to be after FY 2028/2029.

In this regard, it is imperative for KETRACO to tap into the other financing models, including the private sector's potential to bridge the financing gap. The partnership with private sector should not only limited to mobilising funding capital but also execution efficiency, cost control, risk mitigation, technological and project management expertise to deliver a grid that can serve the household, industrial and commercial power needs of the country. KETRACO needs to strive to ensure that Kenya has a Reliable Grid free from constraints, ensure that the grid has enough capacity to match the ever-increasing demand, ensure that grid is extended to allow the country to harness its green energy potential and ensure the grid results in reduced transmission losses.

3. KETRACO JOURNEY TO PUBLIC PRIVATE PARTERSHIP PROJECTS

The Energy Act Cap 314, designated KETRACO as System Operator, allowed open access and similarly allowed for licensing of other Transmission Operators. This opened up the playing field allowing other entities participate in the development and operation of transmission system and at the same time giving KETRACO the power to enter into long term partnerships with developers of transmission infrastructure and transmission service providers.

The Government of Kenya has demonstrated its commitment to Public Private Partnerships (PPPs) by enacting the PPP Act, Cap 430 which is expected to foster efficiency and accountability in the governance of PPP projects and lead to higher quality transactions. On the other hand, development partners such as IFC, Power Africa, World Bank and AfDB have equally devoted considerable effort to support institutions such as KETRACO to build their PPP capacity by offering technical assistance, workshops, and training courses, among others.

KETRACO has over the period, built internal capacity in processing of PPP projects; between 2021 and 2022, Power Africa in Partnership with Eastern African Power Pool (EAPP) trained the first KETRACO cohort of PPP professionals in KETRACO. In 2022, through partnership with Africa Development Bank (AfDB), KETRACO procured a consultant to assist with development of Guidelines for review of PIPs for transmission Lines projects. The guidelines are currently being utilized in processing the Expressions of Interests (Eols) and proposals received from 2024.

In 2022/2023, through partnership with AfDB, World Bank and Commercial Law Development Program (CLDP), KETRACO is conducting a further capacity building for its PPP Appraisal Team. The USAID's Power Africa Initiative through the EECA program is additionally assisting KETRACO develop templates for Proposals, feasibility studies and project development reports.

Five (5) projects have been identified as candidates for solicited (competitive) Public Private Partnership (PPP) projects to be subjected to screening. Eleven (11) projects have attracted the interest from private firms that have formally expressed their intent to implement the projects through Privately Initiated Proposals (PIP) under the PPP Act.

KETRACO in accordance with the PPP Act has received three (3) expressions of interest from three private firms. These are in different stages of processing; (a) by Adani Energy Solutions Limited (AESL) which has been executed;(b) by consortium of Africa 50 & PowerGrid Limited is in negotiation stage; and (c) by EDF of France is in the proposal stage.

4. DISCLOSURE REQUIREMENTS ON PROJECTS BEING UNDERTAKEN BY ADANI ENERGY SOLUTIONS LIMITED (AESL)

AESL submitted proposals relating to four projects and the same were subjected to the PPP procurement process which entails: evaluation of proposals, project development activities, evaluation of the project development report, negotiations and drafting of the project agreement, stakeholder engagements and finally

obtaining requisite approvals required under the PPP Act.

Having undertaken the above processes, the PPP Committee vide letter dated 5th September 2024 notified KETRACO of its decision to have KETRACO execute the four project agreements with AESL. Section 69 of the PPP Act requires a Contracting Authority (CA) to publish information relating to the projects. The minimum disclosure requirements stipulated under Section 69 are:

4.1 Nature and scope of the project

AESL will implement the projects under the Build – Own – Operate – Transfer (BOOT) arrangement as prescribed under Schedule 1 of the PPP Act, Cap 430. Under the BOOT arrangement, AESL will finance, design, construct, operate and maintain the projects. The projects are:

- i. 400kV Gilgil-Thika-Malaa-Konza transmission line, associated LILOs, new substations and substations extension, including 132kV intertie to existing 132kV system at Thika.
- ii. 400/220/132kV Rongai Substation and 220kV Rongai-Keringet-Chemosit Transmission Line, associated LILOs, new substations and substations extension including 132kV Intertie to existing 132kV system at Chemosit.
- iii. 132kV Menengai-Ol'kalou- Rumuruti transmission line, new substation and substations extensions.
- iv. 132/33kV Thuridibuoro substation and associated LILOs at Thuridibuoro.

4.2 Successful bidder

AESL submitted a Privately Initiated Proposal (PIP) in compliance with the provisions of the PPP Act and was subjected to evaluation and due diligence before a determination was made to award them the projects.

4.3 Key terms in the Project Agreement

Private Party	AESL
Contracting Authority	KETRACO
Success Fee	AESL shall pay to the GoK a success fee being 1% per cent of the total project cost (approximately USD 8 million or KES 1.04 billion)
Performance Security	To guarantee performance, AESL will provide the following performance securities; <ul style="list-style-type: none"> • Financial Close bank guarantee equal to 1% of EPC cost. • Construction period bank guarantee equal to 4% of EPC Cost. • Handback bank guarantee to cover for asset condition during transfer at end of project term.
Limitation of liability	KETRACO and GoK are entitled to terminate the project agreements without any liability should the project fail to achieve financial close save for limited costs incurred for acquisition of wayleaves, licenses/permits
Government support measures	GoK will only provide a Letter of Support which is customary for PPP transactions. Scheduled Completion Date AESL will complete the projects within twenty (24) months from the Effective Date of the project agreement. Failure to complete the projects on time, KETRACO will either enforce the performance security or terminate the agreement.
Project Cost	The estimated project cost is USD 736 million. This cost comprises of engineering costs, construction costs, wayleave acquisition costs, taxes, project development costs, project management costs, insurance, financing cost, success fee & legal costs.
Funding structure	AESL shall fund the project using a mix of debt and equity in the ratio of 70:30. Indicative estimates of the cost of debt and cost of equity are at 11.5% and 16% respectively. It is anticipated that at financial close, the project will achieve a weighted average cost of capital of 10.4% or lower.
Opportunities for cost savings before financial close	AESL is required to undertake competitive, open and transparent tendering for the construction contractor to achieve further cost savings. Further financing cost savings can be achieved by soliciting for debt from concessional lenders by AESL.
Project management	KETRACO and AESL shall jointly appoint an Independent Expert (IE) to assist in monitoring and evaluation of implementation of the project throughout the project term. KETRACO will set up a project implementation team that will work together with the IE and other state actors to ensure successful implementation of the project.
Duration of Concession Period	30 years from Signature date.
Handback of project assets	At expiry of project term, AESL shall transfer all project assets to KETRACO in good condition and free of any encumbrances at no cost to KETRACO or GoK.
Refinancing Gain	In the event of any refinancing by AESL from improved market conditions, KETRACO and AESL shall share the resultant refinancing gain in the ration of 50:50.
Payment Terms	KETRACO will pay an availability based tariff (ABT) to AESL. The tariff is pegged on certain availability thresholds and KETRACO shall levy penalties to AESL should AESL be in breach of those availability thresholds. AESL will invoice for the ABT on a bimonthly basis with KETRACO having a 30-day credit period to effect payment.
Insurance	AESL is required to take out and maintain certain mandatory insurance covers for the projects. These include cover for project assets, WIBA, 3rd party liability, force majeure event cover. Local content requirements The project agreement requires AESL to comply with the local content requirements under the PPP Act, Energy Act and other applicable laws.
Applicable Laws	Laws of Kenya

4.4 Project tariff

The proposed projects will connect existing & new load centers, eliminate constraints in the grid by providing alternative supply routes, reduce power outages and evacuate additional power to the grid. These benefits will result in an exponential increase in power demand & increase in power consumption, reduction of technical losses and improved resilience in the grid. These qualitative benefits traditionally lead to improved quality of supply and subsequent tariff reduction. One of the conditions precedent in the project agreement is approval of the proposed tariff by EPRA. Annual Revenue Requirement (ARR) is one of the key determinants that EPRA considers in determining the tariff. There are certain factors that influence the ARR as shown in the table below.

Particulars	AESL Offer as of 08 March 2024 (PIP)	AESL Revised Offer as of 28 Aug 2024 (PDR)	Next Step
Total Project Cost (USD million)	1,014.02	736.57	Open Price Discovery expected to reduce costs.
Debt/Equity Ratio	70:30	70:30	To negotiate for higher debt ratio.
Cost of Debt	12.94%	11.50%	Debt from DFIs and Green Funds expected to reduce cost.
Cost of Equity-post-tax EIRR	18.00%	16.00%	To negotiate for lower ROE
ARR (USD million)	231.08	164.09	

As highlighted in the table above, KETRACO negotiated on the reduction of the total project cost so as to achieve lower ARR. The initial proposal as submitted by AESL had a total project cost of USD 1014 million. By the end of the negotiations, AESL revised its offer to USD 736 million. This resulted in a reduction of costs by USD 278 million which represent approximately 27% in cost reduction. The cost reductions have led to ARR reduction from USD 231 million to USD 164 million representing a reduction by approximately 29%.

The above costs and associated ARR are expected to reduce further before financial close. In a bid to optimize the project and ensure value for money, KETRACO requires AESL to:-

- Undertake competitive price discovery – this will optimize EPC component of the project cost that is the fundamental cost item as other additional cost items are determined as a percentage of the EPC cost.
- Liaise and negotiate with international development finance institutions (DFI) for cost of debt at single digit interest rates.
- Optimize capital structure of Debt to Equity ratio of 75:25 which enhances affordability and value for money.

At every stage, VfM and affordability analysis is considered, and it is expected that the proposed project should remain affordable and with value for money for the entire life of the project.

EPC cost and Cost of debt will be treated as pass through costs and the private party shall have no direct gains on this. The private party is expected to enhance efficiency and effectiveness during construction period to further reduce EPC costs and further enhance VfM and affordability at commercial operation date, which will in turn reduce ABT during the concession period.

4.5 Social and Economic benefits of the project.

a. Creation of job and business opportunities

During construction and operations phase AESL shall employ Kenyans taking into account compliance to local content requirements. AESL shall also source for goods and services from the Kenyan market in compliance to the local content requirements. This will generate income to the locals resulting in improved livelihoods and the quality of life.

b. Capacity building

Throughout the project term, AESL shall transfer technology and know-how to KETRACO and Kenyan citizens, provide industrial attachment and apprenticeship to Kenyan youths every year.

c. Compensation for Livelihood restoration and resettlement

All Project Affected Persons (PAPs) will be compensated for the loss of their assets i.e., structures and any damage to crops and trees. They will also be compensated at market value for limited loss of use of land for the parcels that will be affected by the transmission lines. In addition, any loss of business and loss of income will be compensated as part of livelihood restoration programs.

Compensation shall be full, prompt and just, with all persons displaced by the project being fully resettled. This is aimed at improving the livelihoods of the PAPs, mitigating the negative impacts of the projects on them and ensuring that the project leaves them in a better state than before.

d. Reliable power supply

The transmission lines will connect the host counties to the national electricity grid, hence ensuring reliable power supply to the different parts of the respective counties. It is expected that with reliable power supply: -

- (i) Investors will be attracted to invest in these counties and create job opportunities to Kenyan citizens.
- (ii) The standards of education will improve in these counties as electricity, besides enabling extended learning hours through provision of lighting at night, will support other learning areas relying on power such as woodwork, metalwork, among others.
- (iii) Support provision/delivery of health care: Health care workers and facilities need electricity to refrigerate vaccines, sterilize and power equipment, and provide light for emergency procedures that can't wait until daytime.
- (iv) Business enterprises need power to run their operations: Depending on the nature of business, electricity is needed for lighting, running machinery, and enabling communications technologies. Residents will start up new businesses, especially those that require power supply. Additionally, existing businesses will benefit from reliable power supply.
- (v) Support agriculture for food security: The provision of reliable power in the project areas will spur growth of the agriculture sector at both subsistence and commercial levels. Electricity will power farm mechanization, value addition, food processing and storage, modernization of livestock farming and support irrigated farming resulting in doubling yields from rain-fed agriculture.

e. Benefits of the projects

(i) 400kV Gilgil-Thika-Malaa-Konza

This transmission line will increase the capacity, reliability, and stability of Kenya's electricity grid by implementing the 400kV ring. With its significant capacity for carrying large amounts of electricity, it will enable the integration of new power generation projects and address the rising electricity demands in the region. This initiative will facilitate the delivery of clean, sustainable energy to consumers and supports Kenya's goals of reducing carbon emissions and fostering environmental sustainability. The transmission line will play a vital role in expanding electricity access in its service areas.

(ii) 400/220/132kV Rongai Substation

This project aims to significantly enhance the transmission and distribution network in western Kenya, fortifying the electricity grid, facilitating the evacuation of renewable energy, and providing affordable, clean energy to consumers. The substation will help balance supply and demand, manage power flow, and prevent grid failures or blackouts. Additionally, it will bolster the power exchange market within the Eastern Africa Power Pool (EAPP).

(iii) 220kV Rongai-Keringet-Chemosit

This transmission line is designed to carry electricity from Rongai to the Keringet and Chemosit load centers. Its purpose is to enable efficient and dependable distribution of electrical power to meet consumer demand in these areas and to reduce the occurrence of power outages.

The 220kV D/C Rongai-Keringet-Chemosit Transmission Line will enhance the electricity grid and bolster the reliability of power supply to local industries, particularly tea factories in the Olenguruone region. Currently, the Olenguruone area receives electricity from 33kV feeders, which are susceptible to failures during rainy weather, resulting in an unstable power supply.

(iv) 132kV Menengai-Ol Kalou-Rumuruti

Responsible for transmitting electricity generated by the Menengai Geothermal Power Plant in Nakuru County, this line runs through Nyandarua County and concludes at the existing Rumuruti substation in Laikipia County, where electricity is distributed to various customers, including residential, commercial, and industrial users. This line is engineered to manage a substantial electrical load, ensuring a reliable power supply to meet the increasing energy needs of the region.

(v) 132/33kV Thurdiuoro Substation

The aim of the substation project is to improve the power supply quality throughout the entire South Nyanza region while meeting the increasing energy demand in surrounding areas. It will enhance voltage stability within Kisumu County and improve the reliability of power by ensuring backup supply options for the area. Furthermore, it will strengthen the reliability of power supply through redundancy from the Sondu Miriu Hydropower generating station.

4.6 Expected asset quality when the project is handback.

Within the project agreement, KETRACO and AESL have agreed upon an elaborate and comprehensive handback requirements. This aspect requires that the infrastructure must be returned to KETRACO in good working condition. These conditions include:

- (a) Operational Standards: The transmission system must be fully operational, compliant with technical specifications, and capable of continuing to meet demand without significant refurbishment.
- (b) Maintenance Standards: The asset must be maintained according to agreed maintenance schedules, so that it has a remaining useful life to continue operating effectively beyond the contract period.

At the end of project term, AESL will transfer the project assets to KETRACO at no cost and with a remaining useful life of more than 10 years. This will enable KETRACO to continue to provide reliable transmission services at little cost to cover for operation and maintenance thus benefiting the public.

4.7 Manner in which the project will be monitored and reported on during the duration of the project.

Parties will contract an Independent Expert to oversee implementation of the project. The Independent Expert will review engineering design, inspect and monitor construction works, compliance with standards, permits, environmental and social commitments and procedures, among others.

KETRACO will establish a dedicated Contract Implementation Team to oversee implementation of the project in compliance with the Project Agreement and applicable laws.

Under the project agreement, there are certain reporting obligations imposed upon AESL. These include:

- (a) Monthly construction progress reports.
- (b) Monthly operations reports.
- (c) Financial reports – AESL to provide audited financial statements every year as well as quarterly management accounts to KETRACO, EPRA and PPP Directorate.
- (d) Local content reports.